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The effect of weight reduction on antioxidant enzymes and their association with dietary intake of vitamins A,C and E

Ramezanipour M, Jalali M, Keshavarz A, Eshraghian MR, Sadr zade yeganeh H, Bagheri M*
Teahran University of Medical Sciences
ramezanipourm@yahoo.com

Background: Our goal was to assess the effects of weight loss on antioxidant enzymes of red blood cells and it's relation with vitamins A,E and C intake in 30 obese women.
Methods: General information,anthropometric measurements, 3-day food recall,and fasting blood samples were collected from 30 obese women at the beginning of the study and after 3 months intervention. Weight loss was set at about 10% of their weight before the intervention.
Results: Glutathione reductase and catalase activities showed a significant increase ($P < 0.01$) after weight reduction, but no significant changes were seen in the superoxide dismutase and glutathione peroxidase activities. There was a positive linear correlation between daily vitamin C intake with superoxide dismutase enzyme after intervention ($P = 0.004, r = 0.507$). There was a negative linear correlation between vitamin E intake and glutathione peroxidase activity before intervention ($P = 0.005$, $r=-0.5$). A negative correlation was found between daily vitamin A intake and glutathione reductase enzyme before and after intervention ($r=-0.385$, $r=-0.397, P< 0.05$) respectively. No significant correlation was observed between vitamins A,C,E amounts and catalase activity.
Conclusion: Ten percent weight reduction can have a significant role in increasing antioxidant enzymes activities,especially glutathione reductase,and catalase enzymes in obese women. However,it is important to take into consideration a balanced amount of certain nutrients while administering a diet with limited energy.
Keywords: Obesity; enzymic antioxidants; weight reduction

Crocin reduce serum CRP in rats with diabetes mellitus type I

Rezaei S, Noori Sbzikar Z, Sabatsani M*
Student of Veterinary College, Urmia University, Urmia, Iran
noorizahra1990@gmail.com

Background: CRP is a protein found in the blood,it is produced in the liver and the level rises in response to inflammation. It is an acute phase protein and its physiological role is to bind to phosphocholine expressed on the surface of dead or dying cells and some types of bacteria in order to activate the compliment system complex. The objective of this study was to study of the effects of Crocin administration on CRP level in rats with T1DM.
Methods: Diabetes was induced by i.p. injection of STZ, and Crocin was administered i.p. at doses of 12.5,25, 50 mg/kg.
Results: The results of this study revealed that in rats with T1DM insulin was significantly decreased whereas glucose and CRP levels increased ($p<0.05$). Administration of Crocin reduced CRP concentration in serum in dose dependent manner ($P<0.05$). Also there was significant correlation between serum CRP and glucose concentration ($r= 0.83, P<0.01$).
Conclusion: This research showed that the rats with T1DM have elevated basal levels of CRP. Crocin is the chemical constituent isolated from the Saffron and is found to be effective as anti-inflammatory agents and administration of Crocin decreased CRP concentration in serum probably due to anti-hyperglycemic and antioxidant properties.
Keywords: Crocin, diabetes mellitus,CRP,rat

The effect of artichok leaf extract on alanine aminotransferase (ALT) and aspartate aminotransferase (AST) in the patients with Non Alcoholic Steatohepatitis (NASH)

Rangboo V, Rezadoost AM, Noroozi M*
Ghazvin University of Medical Sciences, Ghazvin, Iran
v_207_rangboo@yahoo.com

Background: Based on recent basic and clinical investigations, the extract of artichoke (cynara scolymus) leaf has been revealed to be use as hepatoprotective, and cholesterol reducing purposes. We aimed to assess the therapeutic effects of artichoke on biochemical and liver biomarkers in patients with Non Alcoholic Steatohepatitis (NASH).
Methods: In a randomized controlled trial, 60 consecutive patients suffered NASH were randomly assigned to receive synara scolymus extract (as 6 tablets per day consisted of 2700 mg extract of the herb) as the intervention group or placebo as the control group for two months.
Results: Comparing changes in study markers following interventions showed the improvement in body weight, body mass index, liver enzymes, and also levels of triglyceride and cholesterol were significantly more in group treated with synara scolymus when compared to placebo group. To compare the role of synara scolymus use with placebo on changes in study parameters, multivariate linear regression models were employed indicating higher improvement in liver enzymes and also lipid profiles of triglyceride and total cholesterol following administration of synara scolymus in comparison with placebo use.
Conclusion: This study shed lights on the potential hepatoprotective activity and hypolipidemic effect of synara scolymus in management of NASH.
Keywords: Non Alcoholic Steatohepatitis, synara scolymus, lipid, liver, enzyme

Evaluation the effects of six weeks of moderate-intensity aerobic exercise with pomegranate juice (PJ) on plasma fibrinogen in adult women selection of type-2 diabetes

Rouzbahani M, Abdi A.*
IslamicUniversity, Ayatollah Amoli Branch.Amol, Iran
roozmitra@yahoo.com

Background: The aim of this study was to evaluate the effects of six weeks of moderate-intensity aerobic exercise with pomegranate juice (PJ) on plasma fibrinogen in adult women selection of type-2 diabetes.
Methods: Survey postmenopausal diabetic women aged 45 to 60 years in the city of Babylon, who coordinated Diabetes Association presented the city, among them 34 were selected as subjects were randomly divided into four groups: control, PJ, practice and PJ. Experimental groups consisted of 6 weeks of aerobic exercise training program three times a week for at least 45 minutes per meeting. Two days before and after the training period in the fasting state (12 h) blood samples from the brachial vein was performed in a sitting position.
Results: Results showed that aerobic exercise with consumption of pomegranate juice significantly decreased levels of fibrinogen plasma in older women with type 2 diabetes compared to control group.
Conclusion: According to the research findings aerobic exercise and pomegranate juice decrease plasma fibrinogen but interaction effect is greater than each alone. It is recommended that this type of training with pomegranate juice